

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended, and in light of the following discussion, is respectfully requested.

Claims 1-29 and 32-41 are presently pending in this application, Claims 30 and 31 canceled; and Claims 21 amended by way of the present amendment.

In the outstanding Office Action, Claims 1- 20, 28, 29 and 32-41 were withdrawn from consideration pursuant to 37 C.F.R. 1.142(b), as being drawn to the nonelected first, second, third, fifth and sixth species; the drawings were objected to under 37 C.F.R. 1.83(a) for not showing every feature of the invention; a new title of the invention is required; the abstract is objected to for referring to purported merits of the invention apparatus; the “Disclosure of the Invention” was objected to for informalities; Claims 21-27 were objected to for informalities; Claims 30-31 were objected to as being of improper dependent form; Claims 21-27, 30 and 31 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite; Claims 21-27, 30 and 37 were rejected under U.S.C. 102(a) as being anticipated by JP 2003-075024; Claims 21-27 and 30-31 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. 2006/0213651 A1 to Higashiyama et al.; Claims 21-27 and 30-31 were rejected under 35 U.S.C. 102(e) as being anticipated by US 2006/0162376A1 to Higashiyama et al.

With regard to the objection to the drawings and the objection to Claims 30-31, Claims 30-31 are canceled. Therefore, the objection is moot.

With regard to the objection to the Title, Abstract and Specification, each of these is amended to address the objection noted in the Office Action. Therefore, the objection to the Title, Abstract and Specification is believed to be overcome.

With regard to the rejection under 35 U.S.C. § 112, second paragraph, these claims are amended to correct the informalities noted in the Office Action, Therefore, the rejection is believe to be overcome.

Turning now to the merits, in order to expedite issuance of a patent in this case, Claim 21 is amended to clarify the patentable features of the present invention over the cited references. Specifically, amended Claim 21 recites that “each of the refrigerant passing holes being positioned between respective adjacent pairs of heat exchange tubes arranged longitudinally of the outlet header and included in the group of heat exchange tubes joined to the outlet header, and the distance between the refrigerant passing holes on left and right ends, and the left and right ends of the separating means is longer than the distance between the refrigerant passing holes on left and right ends and the holes adjacent to them.”

As discussed in Applicants’ specification, the refrigerant flowing out of the tubes comes into contact with the separating means without passing directly through the refrigerant holes to flow inside the outlet header also longitudinally thereof. The refrigerant portions flowing out from all the tubes are therefore mixed together. When the exchanger is used as an evaporator, it is likely that the refrigerant will pass through some heat exchange tubes without completely vaporizing and become lower in temperature. Even in such a case, the refrigerant to be admitted into the expansion valve through the refrigerant outlet is given a relatively high uniform temperature since the refrigerant portions from all heat exchange tubes are mixed together. Consequently, a reduction of the expansion valve opening is prevented to avoid the decrease in the flow of refrigerant, diminishing the region of superheat to result in improved refrigeration performance, i.e., improved heat exchange performance.

By contrast, in the evaporator of JP 2003-075024, the distance between the refrigerant passing holes on left and right ends and the left and right ends of the separating means,

respectively, is shorter than the distance between the refrigerant passing holes on left and right ends and the respective holes adjacent to them. In the evaporator of Higashiyama et al. '651 and Higashiyama et al. '237, only one hole, among all the refrigerant passing holes formed on the separating means, is positioned between the respective adjacent pairs of heat exchange tubes.

Therefore, the amended Claim 21 cannot be anticipated by JP 2003-075024, Higashiyama et al. '651, and Higashiyama et al. '237. Further, these references cannot provide the benefits of improved heat exchange performance as described above.

As Claims 22-27 depend from Claim 21, these claims are also patentable for the reasons discussed above.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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